

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application:    MAAS, Patrick J.	]	Art Unit: 3683
	]	
Serial No:    10/595,330	]	Confirmation No. 7603
	]	
Filed:    April 10, 2006	]	Examiner: Melody M. Burch

For:    Double Spring Function Upholstered Furniture Spring Assemblies

**DECLARATION OF TODD VAN DER JAGT**

1.    My name is Todd Van Der Jagt and I am employed as Product Development Manager by Flexsteel Industries, Inc. Assignee and Applicant of the above captioned application.
2.    I have been employed by Flexsteel since 1997. Prior to that I have been employed as a Project and Compliance engineer in the Conversion Vehicle and Seating Industry at Starcraft Corporation and Dygert Seating.
3.    I earned a B.S. in Mechanical Engineering degree from Milwaukee School of Engineering in 1991.
4.    I am familiar with the content of the above captioned application and the history and operations of Flexsteel as they relate to seat production and seat spring production and have inspected business records covering production under both the current invention and the Flexsteel spring made pursuant to US Patent No. 5,269,497 (Barth).
5.    The invention taught in Maas, Serial No. 10/595,330, entitled "Double Spring Function Upholstered Furniture Spring Assemblies" has the following advantages, attributes and commercial results:
  - (a) it is usable in a wide variety of seating configurations enabling customization for desired resilience, performance, "feel" which are important to sales;
  - (b) the combination disclosed and claimed permits greater variety in "feel" and customization because common parts are used, but can be arranged in different configurations such as, but not limited to:
    - (i) more leaf springs for "harder" feel;

- (ii) fewer leaf springs for "softer" feel;
- (iii) different leaf spring spacing for different feel;
- (iv) more coil springs for "harder" feel;
- (v) fewer coil springs for "softer" feel;
- (vi) different coil spring spacing and attachment points for different feel;
- (vii) differing combinations of the above such as more leaf springs but fewer coil springs for different "feels";
- (viii) adaptability to and permitting of more and varying styles of finished furniture because the functional aspects permit greater variation in furniture geometry, such as, but not limited to, shallower, lower seating with the same "feel" as deeper seating;
- (ix) the availability of potentially more support of cushion material provided by the claimed spring arrangement permits greater choices in selecting the type and geometry of cushion material;
- (x) the foregoing combinations are available by varying the number and location of identical component parts, with an accompanying savings in manufacturing inventory when compared to prior art solutions to provide different "feel" to seating;
- (xi) the foregoing combinations are unavailable with the Barth configuration in which the sole resilience is provided by leaf springs fixed in a frame.

6. Gunlock 3,248,748 teaches a wire spring arrangement that would not have been combined with Barth's or Santillo's leaf spring by one of ordinary skill. Wire springs and leaf springs use completely different approaches. This is consistent with Gunlock's incorporation of "torsion bar" portions (Col. 3, lines 20, 26, 42, 44, 46 - 47, 49, 52, 54. This is explained with reference to the perspective view of Fig. 3, referring to "The main portion of the leg is a generally V shaped supporting member having divergent arm portions 62 and 64 connected by a torsion bar 66." Although verbally described as "generally V shaped", Fig 3. indicates this is not really "V shaped" as the two "arms" which

might form the “V” are actually displaced from one another. The other place “V shaped” and “W shaped” is with reference to the plan view of Fig. 1 and the perspective view of Fig. 6, at Col. 2, lines 60 – 63: “Each end supporting spring 28 has a V shaped supporting portion 30 which is secured to the rear rail 22 and a W shaped supporting portion 32 ...”. Looking at reference numbers 30 and 32 in the plan and perspective views, Fig. 1 and 6, one of ordinary skill would not be able to see in what way the text’s “V” and “W” shapes are presented. Spring 34 of Fig. 4 is described in the context of being “V shaped” (“The main portion of the leg is a generally V shaped supporting member having divergent arm portions connected by a torsion bar 76. The upper arm portion has a straight wire 78 connected between torsion bar 74 and an intermediate torsion bar 80’. The torsion bars 80 and 76 are connected by a diagonal wire section 82. The lower arm portion 84 is a straight wire section that interconnects the torsion bar 76 and a foot portion 86 of the leg.”) with the same intermediary torsion bar which makes the shape not “V shaped” at all, except arguable in a certain orthographic projection where the point of view hides the true shape. It is apparent to me that the items in Gunlock’s Fig 3 and 4 act more as coil springs than as an extension spring that is the principle behind the claimed W and V arches in the claimed leaf springs, plus the separate claimed helical springs in the present application. If there were V or W shapes apparent in the drawings of Gunlock, the incorporation of them in wire springs, coupled with the torsion bar rationale can be seen by one of ordinary skill as teaching away from the claimed upwardly opening V and W in combination with leaf springs, and certainly teaching away from the combination of leaf springs plus coil springs.

7. I worked at Starcraft Corporation where we used “flexolator” style upholstery platforms for vehicle seating. Sugie 6,158,815 uses a “flexolator” platform, using a wire grid to support upholstery foam in a vehicle seat, notable for needing a limitation in vertical travel. The flexolator wire grid platform is intended to be used for supporting the foam, and not considered a resilient member in seating design. The longitudinal wires in Sugie hold the transverse

wires in position and the transverse wires are considered to act primarily in tension, with all resilience designed to be provided by the coil springs on the sides. Sugie would not typically be combined with a leaf spring to add coil spring resiliency acting in combination with leaf spring resiliency, with the coil spring oriented longitudinally and parallel to the leaf spring length.

7. When originally planned, Applicant envisioned using the claimed spring arrangement in only selected products. The majority of the product line was to remain using prior art configurations such as Barth or even Santillo 3,156,460 or Crahan 2,788,844. Customer (dealer) and consumer acceptance was so great within approximately the first one year of sales that the use of the spring arrangement has been expanded into approximately ninety percent of Applicant's furniture products. These advantages include those described above in connection with paragraph 5 (a) - (b) (i) - (xi). This ability to address varying occupant comfort needs, manufacturing efficiencies because of adaptability and the ability to design more styles because of adaptability are areas where the claimed spring arrangement directly contributed to commercial success of the finished product.

8. Further Declarant sayeth naught.

#### DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully Submitted,

Dated: 6-15-11

  
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Prepared by:

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